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10/599,438	02/27/2008	Ulrich Craemer	78857.105096	8870

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EXAMINER
TEIXEIRA MOFFAT, JONATHAN CHARLES

ART UNIT	PAPER NUMBER
2863	

NOTIFICATION DATE	DELIVERY MODE
09/13/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

AustinUSPTO@kslaw.com
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 March 2010</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-15</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-15</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>28 September 2006</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

As noted by the Pre-Appeal Board Decision of 6/14/2010, this application has been re-opened for prosecution.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the fault decision of claims 5, 10 and 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 1, 6 and 11 are objected to because of the following informalities:

The term "signal-value-range multiple output type sensor" is neither clear nor concise and not very descriptive of the concept applicant intends to capture. From examiner's understanding, it is not the sensor type which is being detected, but whether there is a) one sensor or b) multiple sensors being multiplexed. The "signal-value-range" part of the phrase cannot be deciphered by the examiner. The examiner suggests, perhaps "multiplexed sensor output" and "non-multiplexed sensor output" or the like.

From applicant's specification, it also appears to the examiner that the term "gradient" is not entirely accurate. From examiner's understanding, the system is looking for a switch from a high to a low value of visa versa as a step function. This is not really a 'gradient' as the slope is nearly infinite, but more accurately a simple arithmetic change.

Further, and in general, the claims are not as clear and concise as may be possible. In claim 1, for example, the third 'determining' step appears to add no limitations that the 4th and 5th steps of 'recognizing' don't already perform. Claim 6, on the other hand, appears to address all limitations in a briefer format.

Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1.

Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to

non-statutory subject matter.

The claims are drawn to a "tangible computer readable medium". The broadest

reasonable interpretation of a claim drawn to a computer readable medium covers forms of non-

transitory tangible media and transitory propagating signals *per se* in view of the ordinary and

customary meaning of computer readable media, particularly when the specification is silent (see

MPEP 2111.01). Because the broadest reasonable interpretation covers a signal *per se*, a

rejection under 35 USC 101 is appropriate as covering non-statutory subject matter. See 351 OG

212, Feb 23 2010.

The Examiner suggests that Applicant amends the claims as follows: "<u>non-transitory</u>

computer readable medium containing computer instructions stored therein for causing a

computer processor to perform".

2.

Claims 6-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed

to non-statutory subject matter.

Specifically, applicant's invention appears to be directed to a method which is not tied to

a specific machine or apparatus. Instead, it appears that this method may be performed on either

a general-purpose computing device or even as a mental process. Further, it has been noted that

mere field-of-use or insignificant extra-solution activity, though tied to a machine, is not

sufficient to tie the method to a specific machine or apparatus. See MPEP 2106.IV.B and *In re*

Bilski, 545 F.3d 943, 88 USPQ2d 1385 (Fed Cir. 2008) and *In re Alappat*, US Court of Appeals

Federal Circuit No. 92-1381.

Specifically, although the measurements are likely performed by a machine, the thrust of

the invention, i.e. determination of what type of sensor, could be reasonably performed by a

human having knowledge of such sensor measurements.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making
> and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it
> pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode
> contemplated by the inventor of carrying out his invention.

3.

Claims 4-5, 9-10 and 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

One of ordinary skill in the art would not be able to determine the scope of claims 4, 9 or

14. Firstly, from the parent claims, the first and second conditions are checked *before* a sensor is

recognized, these claims appear to imply the opposite. The claims also discuss a signal value

previously registered, which is not discussed in the parent claims. Finally, "assigning"

"measured variables" to "measured values" would not be understood by one of ordinary skill in

the art.

Claims 5, 10 and 15 depend directly from claims 4, 9 and 14 respectively and thus

contain the same issues.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.

Claims 1-3, 6-8 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gee (US pat 5397924) and Rigsby (US pat 5739592).

With respect to claim 1, Gee discloses a method comprising:

1) Checking a first condition that will have been met if a measuring signal of a sensor

(Abstract) exceeds a first threshold (column 3 lines 20-40 and column 6 lines 15-20). *The*

master controller issues an interrogation signal to which the slave device will respond if it is of

the type which includes multiplexed communication (column 3 lines 30-39 and column 7 lines

55-67). This response can be considered a sensor signal because the trailer includes sensors

(Fig 1) and is thus a sensor itself.

Although not specified by Gee, since the response signal is digital, it will logically

include a '1' value which would be required to exceed a voltage threshold in order to be

recognized as a '1' instead of a '0'. This means that in waiting for a response signal, one of

ordinary skill in the art would find obvious that the master device is waiting for at least a first '1'

value above a threshold, which is reasonably a value which 'exceeds a first threshold' as claimed.

Thus the language of the claims is, <u>as a whole,</u> obvious.

2) Checking a second condition if the first condition has been met, with the second condition having been met if a gradient of the measuring signal is greater in amount than a predefined second threshold (column 3 lines 20-40).

Although not specified by Gee, one of ordinary skill in the art would find this obvious. As discussed above, from applicant's own specification, the 'gradient' is really a step change from high to low or visa versa. Such a step change also naturally occurs in a digital signal, such as the response signal discussed by Gee. Thus, one of ordinary skill in the art would reasonably agree that in monitoring the digital code response of Gee, the system is looking for changes from high '1' to low '0' and visa versa in order to read and decipher the code. Thus one of ordinary skill in the art would agree that, based upon applicant's disclosure of gradient, the system of Gee is monitoring for both a threshold (logical high) and a change (transition between logic values indicating a '1'-'0' or a '0'-'1' change) as would logically be present in a digital code. Thus the language of the claims is, as a whole, obvious.

3) Determining whether the sensor is (a) a signal-value-range multiplex output type sensor having at least two different outputs that are multiplexed, or (b) not a signal-value- range multiplex output type sensor having at least two different outputs that are multiplexed (Fig 2 and column 3 lines 30-39 and column 7 lines 55-67), including: *From applicant's disclosure, and as discussed above, multiplexed and non-multiplexed are understood to be equivalent to the claim language of 'signal-value-range multiplex output type' and its opposite. Rigsby (column 3 lines 35-55) summarizes the determination of multiplexed vs. non-multiplexed in Gee more succinctly and explicitly than Gee.*

4) Recognizing the sensor as a signal-value-range multiplex output type sensor if the first

and second conditions have been met (column 3 lines 30-39 and column 7 lines 55-67), and

recognizing the sensor as not a signal-value-range multiplex output type sensor if at least one of

the conditions has not been met (column 3 lines 12-15). *As above, if both the logic high and*

transition are detected, the system assumes the trailer is of a multiplexed type. If these

conditions are not met, it is assumed to be of the older non-multiplexed type.

With respect to claims 2, 7 and 12, Gee discloses that the first and second conditions

are in each case checked close in time to a start of operation of the sensor (column 3 lines 21).

With respect to claims 3, 8 and 13, Gee discloses that the sensor having the signal-

value-range multiplex output for the measuring signal will be recognized if the first and second

conditions have been met a predefined number of times, and otherwise the sensor not having a

signal-value-range multiplex output for the measuring signal will be recognized (column 3 lines

20-40). *Gee waits a set amount of time for the response signal. The response signal, being*

digital, will have a number of transitions between '0' and '1'. Thus the conditions will be met 'a

number of times' even if it is only once.

With respect to claims 6 and 11, Gee discloses a method and apparatus with means for:

1) Determining whether a measuring signal of a sensor exceeds a first threshold

(Although not specified by Gee, since the response signal is digital, it will logically include a '1'

value which would be required to exceed a voltage threshold in order to be recognized as a '1'

instead of a '0'. This means that in waiting for a response signal, one of ordinary skill in the art

would find obvious that the master device is waiting for at least a first '1' value above a

threshold, which is reasonably a value which 'exceeds a first threshold' as claimed.) and if so,

determining whether a gradient of the measuring signal is greater in amount than a predefined

second threshold (*Although not specified by Gee, one of ordinary skill in the art would find this*

obvious. As discussed above, from applicant's own specification, the 'gradient' is really a step

change from high to low or visa versa. Such a step change also occurs in a digital signal, such

as the response signal discussed by Gee. Thus, one of ordinary skill in the art would reasonably

agree that in monitoring the digital code response of Gee, the system is looking for changes from

high '1' to low '0' and visa versa in order to read and decipher the code. Thus one of ordinary

skill in the art would agree that, based upon applicant's disclosure of gradient, the system of Gee

is monitoring for both a threshold (logical high) and a change (transition between logic values

indicating a '1'-'0' or a '0'-'1' change) as would logically be present in a digital code.), and if so,

identifying the sensor as a signal-value-range multiplex output type sensor (column 3 lines 20-40

and column 6 lines 15-20 and column 7 lines 55-67).

2) If either step of determining fails, then identifying the sensor as not being a signal-

value-range multiplex output type sensor (column 3 lines 12-15). *As above, if both the logic high*

and transition are detected, the system assumes the trailer is of a multiplexed type. If these

conditions are not met, it is assumed to be of the older non-multiplexed type.

Thus the language of the claims is, <u>as a whole,</u> obvious.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN TEIXEIRA MOFFAT whose telephone number is (571)272-2255. The examiner can normally be reached on Mon-Fri, from 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jonathan C. Teixeira Moffat/
Jonathan C. Teixeira Moffat
9/7/2010